REMARKS

The Office Action issued on May 1, 2007 ("Office Action") withdrew the prior rejection of claims 21-42, then again rejected claims 21-42 under 35 U.S.C. § 103(a) over the combination of U.S. Patents 3,364,630 to Rusk ("Rusk") and 3,355,772 to Kolberg ("Kolberg"). Applicants respectfully traverse.

The Office Action begins the obviousness discussion by stating that "Rusk teaches a method for manufacturing an article that could be used to fulfill the intended use of a spindle liner for manipulating a workpiece on a machine, wherein the article has an inner diameter … ." (Office Action, page 2.) Even at this early point in the argument, Applicants respectfully disagree. Even the title of Rusk identifies the article described therein as an "abrasive roll." Such rough-surfaced objects are not, in fact, suitable for use as an insert in a spindle of a turning machine. If one were to attempt such a use, the abrasive outer surface described in Rusk ("An abrasive roll 9 shown in FIG. 1 generally comprises a cylindrical shaped outer tube 10, which is coded with abrasive granules 12." (Rusk, column 1, lines 68-70)) would severely damage the precision-made inner surface of the turning machine's spindle.

This attribute of Rusk's rolls militates against obviousness of the present claims in at least two ways. First, the lack of suitability of the Rusk abrasive roll for use within a spindle would lead one skilled in the art away from reliance on Rusk when the artist sought to create a spindle liner. Second, even if one were to choose Rusk for an application for which it is not suited, Rusk's teachings—with or without Kolberg—do not lead to the invention presently claimed.

The Office Action acknowledges that Rusk is silent as to the size of the core element relative to the workpiece, and as to the inner dimension of the mold section relative to the inner

diameter of the spindle. Contrary to the discussion in the Office Action, however, Rusk does not imply that the mold section used to make a spindle liner should have an inner dimension slightly smaller than the inner dimension of a spindle, nor that a core element as in claim 21 should be slightly larger in cross-section than a workpiece to be manipulated on the turning machine. Rusk does show that an "axially extending opening" through "a body of a foamed resin" might have "an interference fit with respect to a rotatably driven spindle" that is placed ***inside*** the roll, but there is no suggestion in either reference to make the center opening slightly larger in cross-section than a workpiece, nor to otherwise adapt the Rusk roll to accommodate a workpiece that might move through the roll for manipulation on a turning machine. For these reasons, the combination of Rusk and Kolberg fails to present a prima facie basis for the finding of obviousness.

In addition, Applicants note that claim 28 recites that "the workpiece [to be manipulated by the spindle liner on a turning machine] is extruded stock." The Office Action suggests that this limitation "appears to be drawn to a method of making an article that could be inserted into the article resulting from the process of Claim 21." To the contrary, this limitation is a succinct way of reciting certain characteristics of the spindle liner. These characteristics are not shown or suggested by either cited reference.

Among other things, claim 29 recites the additional step of "assembling a flange-forming mold portion to the tubular mold section [claim 21], where the flange-forming mold portion provides a suitable mounting flange on the spindle liner for use with the turning machine." The Office Action suggests that this step is shown in the cited art because "Rusk teaches that various shapes should be made using shaped molds. Rusk teaches that in at least some embodiments, it is desirable to have flanges, and Kolberg provides shaped articles, including flanges. The

flanges would provided the claimed intended use." (Office Action, page 4 (citations omitted).) To the contrary, the specific illustrations in Figs. 3-5 of Rusk are particularly inappropriate for use as spindle liners, as they fail to match the inner dimensions of a spindle liner with their outer dimensions. Further, these structures shown in Rusk's Figs. 3-5 do not meet the limitation of claim 29 for providing "a suitable mounting flange on the spindle liner for use with the turning machine." It is noted that the Office Action identifies item 29 in Kolberg's Fig. 1 as such a flange. Those "longitudinally spaced grooves" (Kolberg, column 1, lines 60-61), however, are configured in such a way that using them to mount the roll (if one were to attempt to use it as a spindle liner) on a turning machine would be virtually impossible. Kolberg does not even suggest that there be holes in the sides of its "longitudinally spaced grooves," let alone mounting the roll on anything else using those grooves. For this independent reason, Applicants respectfully request the reconsideration of the rejection of claim 29 (and claim 30, depending therefrom), as well as the rejection of claims 40 and 41 based on the same reasoning.

Claim 32 recites, among other things, "selecting a core element [that] is slightly larger in cross-section than [a] workpiece" to be manipulated on a turning machine, as well as "selecting a tubular mold section [that] has an inner dimension slightly smaller than the inner dimension of the spindle" of the turning machine. As discussed above in relation to similar limitations in claim 21, Rusk and Kolberg fail to show or suggest either of these dimensional differentials. The Office Action suggests that the reference in Rusk (at column 3, line 60) to "chucking a section of the foamed materials in a lave and using a file or abrasive paper to contour the foamed material into its desired shape" teaches the step quoted just above. To the contrary, Rusk's chucking was to be done while completing a desired formation of Rusk's abrasive roll, and had nothing to do with the use of the abrasive roll within a spindle, let alone any differential sizing of the roll

(interpreted by the Office Action as representing the interior of a mold section) relative to the interior of a spindle. Such teachings also fail to suggest that Rusk selects a tubular mold section from among a number of molds where the mold section has an inner diameter related to the chuck, let alone relating to anything resembling a spindle. For this independent reason, Applicants respectfully request that the rejection of claim 32 be reconsidered.

The Office Action acknowledges that "Rusk is silent [as] to (a) the core element [being] slightly larger in cross section than the workpiece and the mold section [having] an inner dimension slightly larger than the inner diameter of the spindle," but argues, "The article of Rusk is capable of fulfilling the intended use because it could be used to accommodate a workpiece (Fig. 7, item 58) and inherently fits into a chuck (3-65). Thus, the mold and core size are the same or substantially the same as claimed." In fact, Claim 32 plainly recites that "the selected core element is ***slightly larger in cross-section than the workpiece***" and further that "the selected tubular mold section ***has an inner dimension slightly smaller than the inner dimension of the spindle***." These recitations do not mean that the dimensions are "the same or substantially the same" as implied by the Office Action. Because of these differences between the teachings of the references, even taken together, and the claims presented, Applicants respectfully requested reconsideration of the rejection of claim 32, as well as the claims depending therefrom.

Claim 39 recites that "the workpiece is extruded stock." As discussed above in relation to claim 28, this limitation varies significantly from Rusk's shaft, and that shaft does not anticipate use of extruded stock as a workpiece manipulated by the spindle liner of claim 39. Further, the Office Action suggests that "little patentable weight" should be given to the additional limitation in claim 39 "[b]ecause there is no claimed relationship between claim 28 and claim 21 (no step of inserting or assembly, and of the shape of the workpiece would not

depend on the method of making)." The relationship between claim 39 on one hand and claims 21 and 28 on the other is unclear, but regardless, Applicants respectfully request reconsideration of the rejection of claim 39.

Applicants believe that the application is in condition for allowance, and prompt action by the Office toward that end is respectfully requested. In the event any issue(s) remain, the undersigned invites the Examiner to contact him by telephone to expedite the examination of this application. Thank you.

Respectfully submitted,

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